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RESEARCH ARTICLE

HYPERTENSION – THE SILENT KILLER, AWARENESS OF THE RISK FACTORS AND COMPLICATIONS OF HYPERTENSION AMONG HYPERTENSIVES.

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Abstract

Aims & Objectives:- In the study it was aimed to evaluate awareness of risk factors and complications of hypertension among hypertensive.

Methods:- This study was carried out at Dr. PSIMS & RF, who attended outpatient department from May 2015 to January 2016 among 600 hypertensive patients.

Results:- Out of 600 patients, majority of patient's age was less than 55 years i.e 64%. Females constitute majority of study population i.e 61%. In our study people with BMI more than 25 were more prone to hypertension. Majority of patients are illiterate i.e 68.7%. Majority (89%) are aware that excess salt and lack of exercise constitute major risk for developing hypertension. Majority of patients among hypertensives were aware that they were more prone to heart damage (66.7%) followed by kidney damage (35.71%), Brain damage (34.7%) and others (19%)

Conclusion:- Blood pressure is an important modifiable risk factor for cardiovascular, kidney diseases and stroke. The awareness regarding hypertension is very poor amongst patients and normal people. Through this study we identified areas of importance that need to be considered by awareness programs. Masses should be educated on the risk factors, presenting features and complications of hypertension. This is possible through awareness programmes designed by health professionals and the government.

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Introduction:-

Hypertension is the largest and most important risk factor for cardiovascular and cerebrovascular diseases which are leading causes of death around the globe and is growing in prevalence but poorly controlled virtually everywhere. It is currently the leading risk resulting in considerable death and disability worldwide and accounted for 9.4 million deaths and 7 per cent of disability adjusted life years (DALYs) in 2010 (1,2). The global prevalence of adult hypertension has risen dramatically over the past three decades. A recent systematic review estimated that the overall worldwide prevalence of HTN is approximately 26% in the adult population increased from 5 per cent to

between 20-40 per cent in urban areas and 12-17 per cent in rural areas(3).The number of hypertensive individuals is anticipated to nearly double from 118 million in 2000 to 213 million by 2025(4).Asian countries like India are no less with regards to burden of disease where prevalence rate as high as 35% .

The prevalence of complications due to poor control of hypertension is also rapidly increasing in developing countries and is likely to be related to changing life-styles and to an increased life expectancy. It is estimated that 16 per cent of ischaemic heart disease, 21 per cent of peripheral vascular disease,24 per cent of acute myocardial infarctions and29 per cent of strokes areattributable to hypertension underlining the huge impact effective hypertension prevention and control can have on reducing the rising burden of cardiovascular disease (5). Scicchitano et al. [6,7] suggested that as the metabolic syndrome gathers features and conditions that increase too much the cardiovascular risk profile of hypertensive patients, much more attention should be paid to the patient suffering from metabolic syndrome.

Due to this high prevalence, associated morbidity and mortality interventions which can prevent hypertensionand its complicationslike reducing salt, fat, sugar, alcohol intake and smoking ,increasing physical activity , should be considered,which have the potential to prevent a large proportion of disease events in the whole population, as most of the disease events occur at modest elevations of multiple risk factors rather than at marked elevation of a single risk factor. For example, It is estimated that a 2-mmHg decrease in blood pressure (BP) population wide such as that easily achievable by modest salt reduction, can prevent 151 000 strokes and 153 000 coronary heart disease deaths in India with larger blood pressure decreases yielding higher reductions(8,9)

A comprehensive study must include prevention strategies, increased awareness, early detection, adequate treatment and strict control of hypertension. This can be achieved only if the general population is aware of risk factors ,presenting features and complications. But the level of awareness varies from 25 to 75% regarding treatment, from 11 to 66% about incidence of complications.

There is insufficient documentary evidence with regards to the level of awareness,about hypertension in Indian population. Many questions remain unanswered as to what kind ofawareness programmes are needed for whom.There is no doubt that there is a need for multiple community based awareness programmes about hypertension.But to make these programmes successful the level of awareness has to be assessed.

The Objectives of our study were to assess the level of awareness with regards to risk factors, presenting features, complications of hypertension among hypertensives

Materials and methods:-

This study was carried out at the Dr. Pinnamaneni Siddhartha Institute of Medical Sciences and Research Foundation (which is a tertiary care, teaching hospital which extends health care facilities to the rural population.. The hypertensive patients, who attended the Department of Medicine during May 2015 to Jan2016, were included in the study. 600 patients were recruited by a systematic random sampling, after obtaining their consents.

The study was approved by the Institutional Ethics Committee. A standardized questionnaire with details pertaining to their sociodemographic profiles, anthropometry,

Their body mass index (BMI) was also recorded. The patients were assessed for their Family asset score.The risk factors for Hypertension, awareness of complications of hypertension and awareness of factors which prevent complications were taken.

Results:-**Table 1:-** Demographic characters:

	Frequency	Percent
Age		
≤55	384	64
>55	216	36
Sex		
Male	234	39
Female	366	61
BMI		
≤25	206	34.3
>25	394	65.7
Family Assert		
1	212	35.3`
2	386	64.3
3	2	0.3
Literacy		
Illiterate	412	68.7
Literate	118	31.3
Total	600	100

Table 2:- Risk factors.

Risk factors	Frequency	Percent
Salt Restriction	534	89
Exercise	534	89
Rational Anti HTN medication	486	81
Strict control of cross risk factors like glycemic	208	34.7
Lipid control	222	37
Periodic checks	384	64

Table 3:- Awareness of complications.

Awareness of complications of HTN	Count	%
Brain damage	208	34.7
Heart Damage	400	66.7
Kidney damage	214	35.7
Others	114	19

Data was pooled from patients who attended Dr. PSIMS & RF, outpatient department between May 2015 to January 2016.

The demographic characters are described in Table 1. Out of 300 patients, 64% are of age less than 55 yrs and 36% are more than 55 yrs. Females constitute majority of study population i.e 61%. BMI more than 25 are more prone to hypertension. Majority of patients are illiterate i.e 68.7%

The risk factors are described in table 2. Among awareness of risk factors salt restriction and exercise constitute 89%

Awareness of complications of hypertension are described in table 3

Majority of patients are aware of heart damage (66.7%) followed by kidney damage (35.71%), Brain damage (34.7%) and others (19%)

Discussion:-

Hypertension is a major contributor to the global disease burden. It poses an important public health challenge to both economically developing and developed countries, including Asia. The prevalence and rate of diagnosis of hypertension in children and adolescents appears to be increasing.

A good control of blood pressure will lead to a lower incidence of complications. For this it is extremely vital that the general public is aware of the risk factors, presenting features and complications of hypertension, to enable better and earlier care seeking behaviour and thus earlier diagnosis. This will make prevention easy to achieve. The predictors of hypertension include increasing age, ethnicity, female gender, having a family history of hypertension, uncontrolled diabetes mellitus, obesity, stress, sedentary life style, smoking, and excessive salt and alcohol intake. Awareness will help in moulding the modifiable risk factors in themselves and in those around them, as besides age, race, gender and family history, all the other risk factors are modifiable.

It was very reassuring to see that the participants of our study were well aware of stress, excessive salt intake and obesity as risk factors of hypertension. But there was poor awareness with regards to uncontrolled diabetes mellitus and lipid control. Among complications of our study, participants were more aware of heart damage but they were less aware of brain, kidney and other damages.

Awareness scores were significantly higher in younger people (<55 years of age) and in those with a family history of hypertension. This is due to the fact that younger people are more educated. Relatives of hypertensive patients experience the disease in their family members and learn about it more. Compliance to medications was higher in those with higher awareness scores. This has been reported by many previous studies and further highlights the importance and benefits of increasing awareness.

A comprehensive strategy for reduction in complications, thus mortality and morbidity due to hypertension, must include prevention strategies, increased awareness, early detection, adequate treatment and strict control of blood pressure. This can be achieved only if the general public is aware of the risk factors, presenting features and complications of hypertension. Hypertension is a multi-factorial disorder but any individual risk factor can contribute to overall increase in blood pressure. This makes awareness on the risk factors importance.

An effort to reverse the major risk factors of hypertension is the key aspect of suggested lifestyle changes. Primary prevention aims to reduce or modify hypertension risk factors through the implementation of appropriate policies and educative programs, in order to avoid or delay the development of cardiovascular disorders, whereas, primordial prevention focuses on the prevention of the emergence of risk factors, and hence, the importance of the present study.

Conclusion:-

Blood pressure is an important modifiable risk factor for cardiovascular , kidney diseases and stroke. The awareness regarding hypertension is very poor amongst patients and normal people. Through this study we identified areas of importance that need to be considered by awareness programs. Masses should be educated on the risk factors, presenting features and complications of hypertension. This is possible through awareness programmes designed by health professionals and the government.

References:-

1. Lim SS, Vos T, Flaxman AD, Danaei G, Shibuya K, Adair-Rohani H, et al. A comparative risk assessment of burden of disease and injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990-2010: a systematic analysis for the Global Burden of Disease Study 2010. *Lancet* 2013; 380 : 2224-60.
2. Gupta R. Trends in hypertension epidemiology in India. *J Hum Hypertens* 2004; 18 : 73-8.
3. Reddy KS, Shah B, Varghese C, Ramadoss A. Responding to the threat of chronic diseases in India. *Lancet* 2005; 366 : 1744-9.
4. Revised Draft Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020 (version dated 11 February 2013). World Health Organization, 2013. Available from: http://www.who.int/nmh/events/2013/revised_draft_ncd_action_plan.pdf., accessed on March 2, 2013.
5. Devi P, Rao M, Sigamani A, Faruqui A, Jose M, Gupta R, 8. et al. Prevalence, risk factors and awareness of hypertension in India: a systematic review. *J Hum Hypertens* 2013; 27 : 281-7.
6. Scicchitano P, Gesualdo M, Carbonara S (2013) What's New and What Gaps in 2013 European. *Cardiology and Angiology: An International Journal* 3: 181-191
7. Guidelines for the Management of Arterial Hypertension: A Reappraisal. *CA* 2015. 3: 181-91.
8. Rodgers A, Lawes C, MacMahon S. Reducing the global burden of blood pressure related cardiovascular disease. *J Hypertens* 2000; 18 (Suppl) : S3-6.
9. Mohan S, Prabhakaran D. 12. Review of salt and health: situation in South-East Asia Region. Background paper for the Expert Meeting on Population Sodium Reduction Strategies for Prevention and Control of Noncommunicable Diseases in the South-East Asia Region. New Delhi: WHO SEARO; 2012.